AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (currently amended): A method of decision making by an expert system in the absence of clearly identifiable rules, according to which this system one establishes decision making rules comprising at least two variables for each of which at least one limit is not strict, ~~characterized in that this system asks~~ comprising the steps of:

asking questions with a view to allowing the system to introduce ~~one introduces~~ a compensation condition into the nonclearly identifiable rules[[,]] ;

~~that the expert that one determines~~ determining one expert with the system, for each parameter of a compensatory condition, at least one particular point belonging to a compensation boundary and connected with the parameter[[,]] ; and

~~that the system that one~~ deducing the system ~~deduces~~ therefrom the value of the parameters, that it [[that]] one applies the set of rules and that it that one deduces the decision therefrom.

2. (currently amended): The method as claimed in claim 1, ~~characterized in that~~ wherein the compensation either holds or does not hold, and that there is just one single compensation boundary.

3. (currently amended): The method as claimed in claim 1, ~~characterized in that~~ wherein the conditions in the premises are rendered fuzzy by the expert, that the compensation may hold to a greater or lesser extent, that there are two compensation boundaries, that the application of the rules makes it possible to calculate a degree of possibility regarding the set of possible alternatives, and that the system one must interpret the final distributions of possibility so as to deduce the decision therefrom.

4. (currently amended): The method as claimed in ~~one of~~ claim[[s]] 1 ~~to 3~~, ~~characterized in that~~ wherein the compensation condition is written as the aggregation by a simple unweighted sum of utility functions on each variable, that the utility functions are piecewise affine, that an the expert provides the abscissa of the points delimiting the affine parts, and that the parameters of the compensation condition are the ordinates of these points.

5. (currently amended): The method as claimed in claim 4, ~~characterized in that~~ wherein the expert provides in relative terms with respect to the extreme values the ordinates of the utility functions for all points delimiting the affine parts except for the two extreme points and the threshold, that the utility at the threshold is zero and that the parameters of the compensation condition are the ordinates of the utility functions for the extreme points.

6. (currently amended): The method as claimed in claim 4, ~~characterized in that~~ wherein the utility at the threshold is zero and that the parameters of the compensation condition are the ordinates of the utility functions for all points delimiting the affine parts except for the threshold.

7. (currently amended): The method as claimed in ~~one of~~ claim[[s]] 5 ~~to 6~~, ~~characterized in that~~ wherein the particular points are such that all their coordinates according to the variables except one are equal to one of the values delimiting the affine parts of the utility functions, that the system one requests the expert to provide the value according to the nonfixed coordinate so that the particular point is situated exactly on a compensation boundary, that the system one determines a characteristic point for every variable and every value delimiting the affine parts of the utility function on this variable such that the coordinate of the characteristic point along the variable is equal to the value and such that the ordinate of this value is a parameter, that the relations that one has on the characteristic points culminate in a set of system equations whose unknowns are the parameters, and that the system solves this set with a suitable classical procedure.

8. (currently amended): The method as claimed in claim 7, ~~characterized in that~~ wherein the expert determines for each variable the type of compensation to which it belongs, that this

provides a set of equations and of inequalities, that it is necessary to append the equations arising from the characteristic points, and that the system one solves this system according to a classical procedure.

9. (currently amended): The method as claimed in claim 7, ~~characterized in that~~ wherein all the variables correspond to a compensation of the type for which, for each variable R_i, there exists a value of R_i above or below which no more compensation is possible regardless of the value according to the other variables, that the expert provides as relative values with respect to the extreme values the ordinates of the utility functions for all points delimiting the affine parts except for the two extreme points and the threshold, that the utility of the threshold is zero, that the parameters of the compensation condition are the ordinates of the utility functions for the extreme points, that fuzziness is introduced, that the conditions in the premises are rendered fuzzy by the expert, that the compensation may hold to a greater or lesser extent, that the characteristic points are such that the component along a well-satisfied variable corresponds to the maximum value along this variable, that the component along a poorly satisfied variable is free, that the system one asks the expert to provide the value along the free coordinate so that the particular point is situated exactly on a compensation boundary and that all the other components are fixed at the thresholds.

10. (currently amended): The method as claimed in claim 1, ~~characterized in that~~ wherein the rule base corresponds to a decision tree.

11. (currently amended): The method as claimed in claim 3, ~~characterized in that~~ wherein the rule base corresponds to a decision tree, and that a single alternative may be entirely possible in the final distribution of possibilities.

12. (currently amended): The method as claimed in claim 11, ~~characterized in that~~ wherein the system one reveals in the decision tree the pairs of complementary conditions, including the compensation conditions, that the system one processes the complementary conditions at the same time while separating the kernel of their fuzzy set by a very small number.

13. (currently amended): The method as claimed in ~~one of~~ claim[[s]] 11 ~~to 12~~, ~~characterized in that~~ wherein the system one commences by formally introducing compensation, then that the system one formally introduces fuzziness, then that the system one specifies the noncompensatory fuzzy conditions, and finally that the system one specifies the compensatory fuzzy conditions.

14. (new): The method as claimed in claim 2, wherein the compensation condition is written as the aggregation by a simple unweighted sum of utility functions on each variable, that the utility functions are piecewise affine, that an the expert provides the abscissa of the points delimiting the affine parts, and that the parameters of the compensation condition are the ordinates of these points.

15. (new): The method as claimed in claim 3, wherein the compensation condition is written as the aggregation by a simple unweighted sum of utility functions on each variable, that the utility functions are piecewise affine, that an the expert provides the abscissa of the points delimiting the affine parts, and that the parameters of the compensation condition are the ordinates of these points.

16. (new): The method as claimed in claim 6, wherein the particular points are such that all their coordinates according to the variables except one are equal to one of the values delimiting the affine parts of the utility functions, that the system one requests the expert to provide the value according to the nonfixed coordinate so that the particular point is situated exactly on a compensation boundary, that the system one determines a characteristic point for every variable and every value delimiting the affine parts of the utility function on this variable such that the coordinate of the characteristic point along the variable is equal to the value and such that the ordinate of this value is a parameter, that the relations that one has on the characteristic points culminate in a set of system equations whose unknowns are the parameters, and that the system solves this set with a suitable classical procedure.

17. (new): The method as claimed in claim 12, wherein the system one commences by formally introducing compensation, then that the system one formally introduces fuzziness, then that the system one specifies the noncompensatory fuzzy conditions, and finally that the system one specifies the compensatory fuzzy conditions.